

Listing of All Claims Including Current Amendments

1. (Currently Amended) A dental construct, comprising:

a dental construct substrate;

an image layer disposed at least partially on a surface of the dental construct substrate, the image layer comprising an image or information media composed of a colorant ceramic composition, the image layer fused with the dental construct substrate at a temperature and being essentially free of lead and cadmium; and

a ceramic layer disposed at least partially over a surface of the dental construct substrate and covering at least the surface of the image layer, the ceramic layer comprising at least one or both of a ceramic material and a glaze material, the ceramic layer fused with the image layer at a temperature, the difference in the fusing temperature of the ceramic layer being less than 100°F from the fusing temperature of the image layer, the ceramic layer being generally transparent and essentially free of lead and cadmium.

2. (Cancelled)

3. (Cancelled)

4. (Currently Amended) A dental construct of claim 1-2, wherein the respective fusing temperature of the dental construct substrate, the image layer, and the ceramic layer is between about 1300°F and about 1600°F.

5. (Currently Amended) A dental construct of claim 1-2, wherein the respective fusing temperature of the dental construct substrate, the image layer, and the ceramic layer is between about 1600°F and about 1900°F.

6. (Original) A dental construct of claim 1, wherein the average thickness of the image layer and the ceramic layer is respectively less than 0.5 mm.
7. (Cancelled)
8. (Original) A dental construct of claim 1, wherein the colorant composition of the image layer comprises metal oxide pigment.
9. (Original) A dental construct of claim 1, wherein the colorant composition of the image layer is dental stain.
10. (Original) A dental construct of claim 1, wherein the dental construct substrate has a general configuration of at least a portion of a tooth.
11. (Original) A dental construct of claim 1, wherein the image layer is disposed on the surface of the dental construct substrate by utilizing a decal with the image or information media thereon.
12. (Original) A dental construct of claim 1, wherein the ceramic material or the glaze material containing in the ceramic layer is a material compatible for a dental construct or restoration of such a construct.
13. (Original) A dental construct of claim 1, wherein the ceramic layer is formed essentially from a dental glaze material.
14. (Original) A dental construct of claim 1, wherein the ceramic layer is formed essentially from dental porcelain having a transparent or translucent nature upon fusing at a temperature.
15. (Original) A dental construct of claim 1, wherein the image layer comprises an image consisting at least one of a figural image, a picture, an alphanumeric character, a

letter, a sign, a code, data, a symbolic image, and other information for a personal or social use.

16. (Original) A dental construct of claim 1, wherein the image layer is disposed on a front surface of the dental construct substrate.

17. (Original) A dental construct of claim 1, wherein the image layer is disposed on a rear surface of the dental construct substrate.

18. (Original) A dental construct of claim 1, wherein the image layer is disposed on a recessed surface of the dental construct substrate.

19. (Currently Amended) A dental construct, comprising:

a dental construct substrate;

a ceramic layer disposed at least partially on a surface of the dental construct substrate, the ceramic layer comprising a ceramic material;

an image layer disposed at least partially on a surface of the ceramic layer, the image layer comprising an image or information media composed of a colorant ceramic composition, the image layer fused with the ceramic layer at a temperature and being essentially free of lead and cadmium; and

another ceramic layer disposed at least partially over a surface of the dental construct substrate and covering at least the surface of the image layer, the another ceramic layer comprising a ceramic material and fused with the image layer at a temperature, the another ceramic layer being generally transparent and essentially free of lead and cadmium.

20. (Original) A dental construct of claim 19, wherein the respective fusing temperature of the dental construct substrate, the image layer, and each of the ceramic layers is between about 1300°F and about 1600°F.

21. (Original) A dental construct of claim 19, wherein the respective fusing temperature of the dental construct substrate, the image layer, and each of the ceramic layers is between about 1600°F and about 1900°F.

22. (Currently Amended) A dental construct comprising:

a substrate for a dental construct, the substrate having a front surface and a rear surface when seen from outside after installation into a mouth; and

at least one overcoat layer disposed on the rear surface of the substrate, the at least one layer containing a ceramic material fused with an image or information media composed of a ceramic colorant composition, the image or information media containing characters, codes or numbers usable for identification of a person or animal bearing the dental construct, the image or information media being noticeable from the rear surface of the dental construct without changing the appearance thereof from the front surface of the dental construct, the at least one layer having a mechanical strength and characteristics suitable for the dental construct, and essentially free of lead and cadmium.

23. (Currently Amended) A method of producing a dental construct, comprising the steps of:

providing a dental construct substrate;

providing a decal sheet having an image or information media ~~thereon~~ composed of a colorant ceramic composition;

positioning the decal sheet on an appropriate surface of the dental construct substrate;

firing the dental construct substrate with the decal sheet attached thereon within a vacuum furnace at a temperature for a predetermined time such that the image or information media on the decal sheet is firmly fused on the surface of the dental construct substrate;

applying a ceramic glaze material over the fired dental construct substrate at least on a surface covering the fused image or information media; and

firing the glaze-applied dental construct substrate at a temperature for a predetermined time such that the glaze material is fused to form a protective layer over the dental construct substrate covering at least a portion of the image or information media, the firing temperature of the glaze-applied dental construct being within a range of difference less than 100°F from the firing temperature of decal-attached dental construct.

24. (Original) The method of claim 23, wherein the image contained decal sheet is provided by printing the image or information media on the blank decal sheet.

25. (Original) The method of claim 24, wherein the image contained decal sheet is provided by a screen printing method.

26. (Original) The method of claim 23, wherein the image contained decal sheet is provided by painting or drawing the image or information media on the blank decal sheet.

27. (Original) The method of claim 23 further comprising the step of cutting the imaged decal sheet to an appropriate size prior to the positioning on the dental construct substrate.

28. (Original) The method of claim 23, wherein the dental construct substrate is a dental porcelain or a dentin substrate.

29. (Currently Amended) The method of claim 23 further comprising the steps of:

applying a ceramic glaze material on the dental construct substrate; and

firing the glaze-applied dental construct substrate at a temperature for a predetermined time such that the glaze material is fused to form a protective layer over the dental construct substrate;

wherein the above two steps are performed prior to the positioning of the image contained decal sheet on the dental construct substrate, and the above specified temperature of firing the glaze-applied dental construct being within a range of difference less than 100°F from the firing temperature of decal-attached dental construct.

30. (Original) The method of claim 23, wherein the respective fusing temperature of the dental construct substrate and the ceramic glaze material are between about 1300 °F and about 1600 °F.

31. (Original) The method of claim 23, wherein the respective fusing temperature of the dental construct substrate and the ceramic glaze material are between about 1600 °F and about 1900 °F.

32. (New) A dental construct of claim 1, wherein the image layer is disposed in a recess formed on the surface of the dental construct substrate.

33. (New) A dental construct of claim 22, wherein the rear surface of the dental construct substrate includes a recess and the image or information media is disposed in the recess.